

METHOD AND STRUCTURE FOR CONTROLLING THE
INTERFACE ROUGHNESS OF COBALT DISILICIDE

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ABSTRACT OF THE DISCLOSURE

10 A method of producing electrical contacts having reduced
interface roughness as well as the electrical contacts
themselves are disclosed herein. The method of the
present invention comprises (a) forming an alloy layer
having the formula MX, wherein M is a metal selected from
the group consisting of Co and Ni and X is an alloying
15 additive, over a silicon-containing substrate; (b)
optionally forming an optional oxygen barrier layer over
said alloy layer; (c) annealing said alloy layer at a
temperature sufficient to form a MXSi layer in said
structure; (d) removing said optional oxygen barrier
20 layer and any remaining alloy layer; and optionally (e)
annealing said MXSi layer at a temperature sufficient to
form a MXSi₂ layer in said structure.